

AMENDMENT TO THE CLAIMS:

Claims 1-17 (canceled)

18. (new) Liquid electrolyte battery comprising:

a casing having side walls, a bottom, and a lid;

vertical electrode plates arranged in pairs to form cells within the casing,

a liquid electrolyte having a level disposed above upper edges of the electrodes;

an electrolyte circulating structure comprising:

a plate element disposed above the upper edges of the electrodes and extending across the upper edges in a direction away from a first of the side walls for restraining upward flow of electrolyte surging in a direction generally toward the first side wall, and

a vertical flow channel formed between the first side wall and vertical edges of the electrode plates for conducting an upward flow of the surging electrolyte to a location above the plate elements.

19. (new) The battery according to claim 18 wherein the circulating structure further comprises a vertical plate disposed parallel to the vertical edges of the electrodes to form the flow channel.

20. (new) The battery according to claim 19 wherein the first and second plate elements are secured together.

21. (new) The battery according to claim 18 wherein the circulating structure further includes a return flow preventer for preventing downward flow of electrolyte through the flow channel.

22. (new) The battery according to claim 21 wherein the return flow preventer comprises a web extending from the plate element toward the first side wall.

23. (new) The battery according to claim 21 wherein the return flow preventer comprises a flap valve.

24. (new) The battery according to claim 18 wherein the plate element and the flow channel constitutes a first plate element and a first flow channel, respectively, the circulating device further comprising a second plate element disposed above the upper edges of the electrodes and extending across the upper edges in a direction away from a second of the side walls situated opposite the first side wall, for restraining upward flow of electrolyte surging in a direction toward the second side wall, and a second vertical flow channel formed between the second side wall and vertical edges of the electrode plates for conducting an upward flow of the surging electrolyte to a location above the second plate element.

25. (new) The battery according to claim 24 wherein the first and second plate elements are interconnected and include a vertical passage for conducting a downward flow of electrolyte received from at least one of the first and second flow channels.

26. (new) The battery according to claim 21 further including a second flow preventer disposed above the upper edges of the electrode plates adjacent a second of the side walls disposed opposite the first side wall, the second flow preventer preventing flow of electrolyte in a direction toward the first side wall.

27. (new) A liquid electrolyte battery comprising:

a casing having side walls, a bottom, and a lid;

vertical electrode plates arranged in pairs to form cells within the casing;

a liquid electrolyte having a level disposed above upper edges of the electrode plates; and

an electrolyte circulating structure comprising at least one heating element disposed externally of the casing adjacent the bottom thereof for heating a lower portion of the electrolyte through the casing.

28. (new) The battery according to claim 27 further including a heat protection plate disposed within the casing between the electrodes and a portion of the casing heated by the at least one heating element.

29. (new) The battery according to claim 27 wherein the electrolyte circulating structure further comprises:

a plate element disposed above the upper edges of the electrode and extending across the upper edges in a direction away from the first of the side walls for restraining upward flow of electrolyte surging in a direction toward the first side wall, and

a vertical flow channel formed between the first side wall and vertical edges of the electrode plates for conducting an upward flow of the surging electrolyte to a location above the plate elements.

30. (new) The battery according to claim 29 wherein the heating element is arranged to heat a portion of the first side wall, the electrolyte circulating structure further including a vertical plate disposed parallel to the vertical edges of the electrode plates to form the flow channel, the vertical plate arranged between the electrode plates and the portion of the first side wall being heated, to form a heat protector for the electrodes.

31. (new) A liquid electrolyte battery comprising;

a casing having side walls, a bottom, and a lid;

vertical electrode plates arranged in pairs to form cells within the casing;

a liquid electrolyte having a level disposed above upper edges of the electrode plates; and

an electrolyte circulating structure comprising at least one cooling element disposed externally of the casing for cooling a portion of the casing disposed adjacent the electrolyte level for cooling an upper portion of the electrolyte through the casing.

32. (new) The battery according to claim 31 wherein the circulating structure further comprises:

a plate element disposed above the upper edges of the electrode and extending across the upper edges in a direction away from a first of the side walls for restraining upward flow of electrolyte surging in a direction toward the first side wall, and

a vertical flow channel formed between the first side wall and vertical edges of the electrode plates for conducting an upward flow of the surging electrolyte to a location above the plate elements.

AMENDMENT TO THE DRAWINGS:

The attached replacement drawings include changes to Figs. 1-3, Fig. 11, Fig. 12, and Fig. 29.

Figures 1-2 are labeled "Prior Art"; Fig. 3 has been labeled "Prior Art" and this replacement sheet includes Fig. 4.

Figure 11 has been amended to delete the arrows directed to Figs. 11a-11c.

Figure 12 has been amended to delete the arrows directed to Figs. 12a-12c.

Figure 29 has been amended to label the drawing separately as Figs. 29a, 29b, 29c.